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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,470	12/12/2006	Trygve Burchardt	095868-1017	1168

26371 7590 11/12/2010  
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EXAMINER
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DOUYETTE, KENNETH J

ART UNIT	PAPER NUMBER
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1725

MAIL DATE	DELIVERY MODE
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11/12/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,470	<b>Applicant(s)</b> BURCHARDT, TRYGVE	
	<b>Examiner</b> KENNETH DOUYETTE	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-85 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 38-85 are pending in the application.
2. New grounds of rejection have been introduced.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 63 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 63 recites the limitation "the second layer" in line 1. There is insufficient antecedent basis for this limitation in the claim. For the purposes of this office action, "the second layer" will be interpreted as "the second sheet".

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 38-39, 42-44, 55, 60-62, 64-65, 72, 75-76 and 78-81 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein et al. (US 2003/0013015).

Regarding claims 38 and 61, Klein et al. discloses in Fig 1, an electrode ([0042]) for use in an electrochemical cell (ref 1) comprising:

- a first sheet (ref 2) comprising a hydrogen storage material ([0043]); and
- a second sheet (ref 7) separate (Fig 1) from the first sheet (ref 2), the second sheet (ref 7) comprising a high energy density metal ([0049]) that is configured to act as a hydrogen source (refs 2 and 7 are in contact with one another, Fig 1) for the hydrogen storage material ([0043]) on reaction with electrolyte ([0047]) in the cell (ref 1). Additionally, if a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Regarding claims 39 and 62, Klein et al. discloses all of the claim limitations as set forth above and also discloses the high energy density metal comprises Al and such alloys ([0047]).

Regarding claims 42 and 64, Klein et al. discloses all of the claim limitations as set forth above and also discloses the hydrogen storage material is an alloy consisting of rare earth/mich alloys ([0043]).

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Regarding claims 43 and 65, Klein et al. discloses all of the claim limitations as set forth above and also discloses the first sheet (ref 2) comprises PTFE mixed ([0066]) with the hydrogen storage material ([0043]).

Regarding claim 44, Klein et al. discloses all of the claim limitations as set forth above and also discloses the first sheet (ref 2) comprises carbon mixed ([0043]) with the hydrogen storage material ([0043]).

Regarding claims 55 and 72, Klein et al. discloses all of the claim limitations as set forth above and also discloses a current collector ([0045]) pressed into the first sheet (ref 2).

Regarding claim 60, Klein et al. discloses all of the claim limitations as set forth above and also discloses the high energy density metal ([0049]) is configured to prevent corrosion (refs 2 and 7 are in contact with one another, Fig 1) of the electrode ([0042]). Additionally, if a prior art structure is capable of performing the intended use as recited, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Regarding claim 75, Klein et al. discloses all of the claim limitations as set forth above and also discloses the electrochemical cell (ref 1) is a metal hydride cell ([0043]).

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Regarding claim 76, Klein et al. discloses all of the claim limitations as set forth above and also discloses the electrochemical cell (ref 1) is a nickel ([0044]) metal hydride cell ([0043]).

Regarding claim 78, Klein et al. discloses all of the claim limitations as set forth above and also discloses the electrode ([0042]) is a negative electrode ([0042]).

Regarding claims 79, 80 and 81, Klein et al. discloses all of the claim limitations as set forth above and also discloses the high energy density metal is configured to provide self-charging (refs 2 and 7 contact one another, Fig 1, [0047]-[0048]) for the electrochemical cell (ref 1) and provide increase capacity (refs 2 and 7 contact one another, Fig 1, [0048]-[0049]) for the electrochemical cell (ref 1) and to provide increased peak power (refs 2 and 7 contact one another, Fig 1, [0047]-[0048]) for the electrochemical cell (Fig 1). Additionally, if a prior art structure is capable of performing the intended use as recited, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

### ***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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9. Claims 40-41, 45-46, 63, 66, 82-83 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al. (US 2003/0013015) as applied to claims 38 and 61 above and further in view of Bando et al. (US 5,965,295).

Regarding claims 40, 41 and 63, Klein et al. discloses all of the claim limitations as set forth above but does not disclose the high energy density metal is mixed with PTFE and/or graphite.

Bando et al. discloses in Figs 1-2, an electrode (ref 4) in an electrochemical cell (Fig 1), said electrode (ref 4) comprising a hydrogen storage material (C7/L32-35) and high energy density metal (C7/L37), wherein the hydrogen storage material (C7/L32-35) and the high energy density metal (C7/L37) are in contact with each other such that the high energy density metal (C7/L37) is capable of acting as a hydrogen source for the hydrogen storage material (C7/L32-35) on reaction with electrolyte (C5/L66-67) and the high energy density metal (C7/L37) is capable of acting as anode (ref 4, C7/L11-37) material for the cell (Fig 1). Additionally, the high energy density metal is mixed with PTFE (C33/L45) and/or graphite (C7/L46-47). This configuration enhances over-discharge (C2/L31-32), capacity (C2/L25), charge/discharge cycles (C2/L25-27), and enhanced tensile strength (C2/L40-41).

Bando et al. and Klein et al. are analogous since both deal in the same field of endeavor, namely, batteries.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the PTFE and/or graphite of Bando et al. into the material of

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Klein to enhance over-discharge, capacity, cycling and tensile strength of the electrode incorporating the material.

Regarding claims 45, 46 and 66, Klein et al. discloses all of the claim limitations as set forth above and also discloses the hydrogen storage material is a metal hydride ([0043]) selected from the group consisting of AB<sub>5</sub> ([0043]), AB<sub>2</sub> ([0043]), but does not explicitly disclose A is a Group IIb metal, transition metal, rare-earth metal, or metal of the actinide series, and B is a metal of the transition series, nor that the AB<sub>5</sub> has hexagonal or orthorhombic structure and is LaNi<sub>5</sub> or MnNi<sub>5</sub> where Mm is a combination of La and other rare-earth elements.

Bando et al. discloses the electrode (ref 4) comprises hydrogen storage material (C7/L32-35) that is LaNi<sub>5</sub> or NiMn<sub>5</sub> type (C7/L32-33). This configuration enhances over-discharge (C2/L31-32), capacity (C2/L25), charge/discharge cycles (C2/L25-27), and enhanced tensile strength (C2/L40-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the LaNi<sub>5</sub> or NiMn<sub>5</sub> type of Bando et al. into the material of Klein to enhance over-discharge, capacity, cycling and tensile strength of the electrode incorporating the material.

Regarding claims 82-83, Klein et al. discloses in Fig 1, a method of producing an electrode ([0042]) for an electrochemical cell (ref 1), the electrode ([0042]) comprising a



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hydrogen storage alloy ([0043]) and a high energy density metal ([0049]), the method comprising:

- forming a first sheet (ref 7) of a high energy density metal ([0047]);
- forming a second sheet (ref 2) comprising a hydrogen storage alloy ([0043]); and
- pressing ([0048]-[0049]) the first (ref 7) and second (ref 2) sheets together to form the electrode ([0042]).

Klein et al. does not disclose sintering with a binder (PTFE) the first sheet.

Bando et al. discloses in Figs 1-2, an electrode (ref 4) in an electrochemical cell (Fig 1), said electrode (ref 4) comprising a hydrogen storage material (C7/L32-35) and high energy density metal (C7/L37), wherein the hydrogen storage material (C7/L32-35) and the high energy density metal (C7/L37) are in contact with each other such that the high energy density metal (C7/L37) is capable of acting as a hydrogen source for the hydrogen storage material (C7/L32-35) on reaction with electrolyte (C5/L66-67) and the high energy density metal (C7/L37) is capable of acting as anode (ref 4, C7/L11-37) material for the cell (Fig 1). Additionally, the high energy density metal is mixed and sintered (C33/L38-39) with PTFE (C33/L45). This configuration enhances tensile strength (C2/L40-41) of the structure.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the binder and sintering as disclosed by Bando et al. the structure of Klein et al. to enhance the tensile strength of the structure. Additionally, if a prior art structure is capable of performing the intended use as recited (PTFE controlling

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porosity), then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Regarding claim 85, modified Klein et al. discloses all of the claim limitations as set forth above and also discloses pressing a current collector ([0045]) into the second sheet (ref 2).

10. Claims 47-54, 67-71, 77 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al. (US 2003/0013015) as applied to claims 38, 61 and 82 above and further in view of Young et al. (US 6,461,766).

Regarding claims 47-48, and 67, Klein et al. discloses all of the claim limitations as set forth above but does not disclose a hydrogen electrocatalyst.

Young et al. discloses a battery (C1/L26) comprising an electrode consisting of a hydrogen storage material (C9/L67-C10/L1) and a powdered (C10/L18) passivating material (C9/L67) added to improve activation of the hydrogen storage material (C10/L1-4), the passivating material selected from the group consisting of Ni, Fe, Cr or an alloy thereof (C10/L20-21) and layered (C10/L22) in the electrode active material.

Young et al. and Klein et al. are analogous since both deal in the same field of endeavor, namely, batteries.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating/electrocatalyst material as disclosed by Young

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et al. into the composition of Klein et al. to enhance activation of the hydrogen storage material, enhancing overall battery performance.

Regarding claim 49, Klein et al. discloses all of the claim limitations as set forth above but does not disclose a hydrogen electrocatalyst deposited thereon.

Young et al. discloses a battery (C1/L26) comprising an electrode consisting of a hydrogen storage material (C9/L67-C10/L1) and a powdered (C10/L18) passivating material (C9/L67) added to improve activation of the hydrogen storage material (C10/L1-4), the passivating material layered (C10/L22) in the electrode active material.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating/electrocatalyst material as disclosed by Young et al. as deposited or layered on the material of Klein et al. to enhance activation of the hydrogen storage material, enhancing overall battery performance.

Regarding claim 50, Klein et al. discloses all of the claim limitations as set forth above but does not disclose the high surface area support material is graphite.

Bando et al. discloses in Figs 1-2, an electrode (ref 4) in an electrochemical cell (Fig 1), said electrode (ref 4) comprising a hydrogen storage material (C7/L32-35) and high energy density metal (C7/L37), wherein the hydrogen storage material (C7/L32-35) and the high energy density metal (C7/L37) are in contact with each other such that the high energy density metal (C7/L37) is capable of acting as a hydrogen source for the hydrogen storage material (C7/L32-35) on reaction with electrolyte (C5/L66-67) and the

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high energy density metal (C7/L37) is capable of acting as anode (ref 4, C7/L11-37) material for the cell (Fig 1). Additionally, graphite (C7/L46-47) is mixed in the composition. This configuration enhances over-discharge (C2/L31-32), capacity (C2/L25), charge/discharge cycles (C2/L25-27), and enhanced tensile strength (C2/L40-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the graphite of Bando et al. into the material of Klein to enhance over-discharge, capacity, cycling and tensile strength of the electrode incorporating the material.

Regarding claims 51-52 and 68-69, Klein et al. discloses all of the claim limitations as set forth above and also discloses two distinct sheets (ref 2, 7), but does not disclose a hydrogen electrocatalyst disposed in either sheet.

Young et al. discloses a battery (C1/L26) comprising an electrode consisting of a hydrogen storage material (C9/L67-C10/L1) and a powdered (C10/L18) passivating material (C9/L67) added to improve activation of the hydrogen storage material (C10/L1-4) which may include Mg (C7/L21), the passivating material selected from the group consisting of Ni, Fe, Cr or an alloy thereof (C10/L20-21) and layered (C10/L22) in the electrode active material.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating/electrocatalyst material as disclosed by Young et al. into the composition of Klein et al. to enhance activation of the hydrogen storage

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material, enhancing overall battery performance. Additionally, since Young et al. discloses the passivating material disclosed with both the hydrogen storage material and the Mg, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating material in either of the layers of Klein et al., since the layered structure of Young et al. is a design known in the art. Further, since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the passivating material of Young et al. in either layer of Klein, because selecting one of known designs for a layered electrode would have been considered obvious to one of ordinary skill in the art at the time of the invention and because said electrode containing passivating material in either layer equally well as the one disclosed by modified Young et al. Further still, since it has been held that rearranging parts of an invention involves only routine skill in the art while the device having the claimed dimensions would not perform differently than the prior art device, *In re Japikse*, 86 USPQ 70 and since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art, *In re Einstein*, 8 USPQ 167.

Regarding claims 53 and 70, Klein et al. discloses all of the claim limitations as set forth above and also discloses layers (refs 2 and 7), as well as ref 7 comprising "several layers" ([0049]), but not an additional, separate layer that contains the hydrogen electrocatalyst.

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Young et al. discloses the passivating material (C9/L67) adheres or covers a part of the surface (C10/L10-11) of the hydrogen storage material particles (C10/L1-4).

Covering “a part” of the surface of the particles results in which, for example, the top part of the particles are covered, thus essentially forming a layer entirely comprised of hydrogen electrocatalyst material. This improve activation of the hydrogen storage material (C10/L1-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating/electrocatalyst material as disclosed by Young et al. into the active material composition of Bando et al. to enhance activation of the hydrogen storage material, enhancing overall battery performance. Additionally, partial coating of hydrogen storage material particles forming a surface coating essentially results in a design choice. Since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange a hydrogen electrocatalyst as a separate layer unto itself as taught by Young et al. into the structure of Klein et al., because selecting one of known designs for a layered electrode structure would have been considered obvious to one of ordinary skill in the art at the time of the invention and because said layered electrode defining a separate and distinct layer containing hydrogen electrocatalyst would operate equally well as the one disclosed by Klein et al.

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Regarding claims 54 and 71, modified Klein et al. discloses all of the claim limitations as set forth above and also discloses current collectors ([0045]), but does not explicitly disclose the current collectors are mesh.

Bando et al. discloses a mesh current collector (Fig 2) is pressed into the active materials (C12/L8-13). This configuration enhances active material adhesion to current collectors, enhancing tensile strength (C2/L40-41) of the structure.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the current collector of Klein et al. as mesh as disclosed by Bando et al. to enhance adhesion of active materials to the current collector, enhancing tensile strength of the structure.

Regarding claim 77, Klein et al. discloses all of the claim limitations as set forth above but does not explicitly disclose the electrochemical cell is a fuel cell.

Young discloses a fuel cell (C1/L26-27) containing electrodes containing hydrogen storage materials. Since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange an electrochemical cell of Smith to be a fuel cell, as taught by Young et al., because selecting one of known designs for an electrochemical cell would have been considered obvious to one of ordinary skill in the art at the time of the invention and because said electrochemical cell comprising a fuel cell would operate equally well as the one disclosed by Klein et al.

Regarding claim 84, modified Klein et al. discloses all of the claim limitations as set forth above and also discloses forming a third sheet ("several layers") ([0049]), combined together ([0049]) with the layers (refs 2, 7), but does not disclose an electrocatalyst added to a third sheet.

Young et al. discloses a battery (C1/L26) comprising an electrode consisting of a hydrogen storage material (C9/L67-C10/L1) and a powdered (C10/L18) passivating material (C9/L67) added to improve activation of the hydrogen storage material (C10/L1-4), the passivating material selected from the group consisting of Ni, Fe, Cr or an alloy thereof (C10/L20-21) and layered (C10/L22) in the electrode active material.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the passivating/electrocatalyst material as disclosed by Young et al. into the composition of Klein et al. to enhance activation of the hydrogen storage material, enhancing overall battery performance.

11. Claims 57-59 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al. (US 2003/0013015) as applied to claim 38 and 61 above and further in view of Hampden-Smith et al. (US 2003/0054218).

Regarding claims 57 and 74, Klein et al. disclose all of the claim limitations as set forth above but does not disclose a separator disposed between layers 2 and 7.

Hampden-Smith discloses a battery ([0318]) containing a Zn metal layer ([0318]) and a metal hydride layer ([0318]) separated by a separator ([0320]). Since the instant specification is silent to unexpected result, it would have been obvious to one having



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ordinary skill in the art at the time the invention was made to arrange a layered electrochemical structure of Klein et al. to have a separator between metal and metal hydride layers, as taught by Hampden-Smith et al., because selecting one of known designs for an electrochemical cell would have been considered obvious to one of ordinary skill in the art at the time of the invention and because said electrochemical cell defining a metal layer and metal hydride layer separated by a separator would operate equally well as the one disclosed by Klein et al.

Regarding claim 58, Klein et al. discloses all of the claim limitations as set forth above and also discloses an energy carrier layer comprising one sheet (ref 7); a hydrogen absorption layer comprising the other sheet (ref 2); and a mechanical support (ref 4). While reference does not disclose said first and second sheets containing an energy carrier layer and hydrogen absorption layer respectively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the configuration of said sheets, by incorporating the energy material into the first sheet and the hydrogen absorption material into the second, since it has been held that rearranging parts of an invention involves only routine skill in the art while the device having the claimed dimensions would not perform differently than the prior art device, *In re Japikse*, 86 USPQ 70 and since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art, *In re Einstein*, 8 USPQ 167.

Klein et al. does not disclose a catalyst layer.

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Hampden-Smith et. al discloses a battery ([0320]) that contains a catalyst layer ([0320]) to catalyze an electrochemical reaction within the battery to produce power ([0012]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the catalyst layer of Hampden-Smith et al. into the structure of Klein et al. to catalyze the electrochemical reaction to enhance the power performance of the electrochemical cell.

Regarding claim 59, Klein et al. disclose all of the claim limitations as set forth above but does not disclose the high energy density material is configured to act as an anode.

Hampden-Smith discloses a battery ([0318]) containing a Zn metal anode ([0356]). Since the instant specification is silent to unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange a metal layer of Klein et al. to have act as an anode, as taught by Hampden-Smith et al., because selecting one of known designs for an electrochemical cell would have been considered obvious to one of ordinary skill in the art at the time of the invention and because said electrochemical cell defining a metal layer as an anode would operate equally well as the one disclosed by Klein et al.

12. Claims 56 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al. (US 2003/0013015) as applied to claim 38 and 61 above and further in view of.

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Regarding claims 56 and 73, Klein et al. discloses all of the claim limitations as set forth above but does not disclose the first and second sheets are coupled together by a resistor.

Bauerline discloses a Ni/metal hydride cell (Abstract) that is coupled to a resistor ([0027]) to reduce/stop charging and allow for charge storage ([0027]).

Bauerline and Klein et al. are analogous since both deal in the same field of endeavor, namely, batteries.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the resistor of Bauerline into the structure of Klein et al. to reduce/stop charging and allow for a definite charge quantity to be stored.

### ***Response to Arguments***

13. Applicant's arguments with respect to claims 38-85 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENNETH DOUYETTE whose telephone number is (571)270-1212. The examiner can normally be reached on Monday - Thursday 6am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571) 272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. D./  
Examiner, Art Unit 1725

/Jonathan Crepeau/  
Primary Examiner, Art Unit 1725